CALIFORNIA SIDECAR
TRIKE CONVERSION KIT
INSTALLATION INSTRUCTIONS

VALKYRIE INTERSTATE

FOR INSTALLATION ASSISTANCE, CALL PARTS & TECHNICAL SUPPORT
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INTRODUCTION

DISCLAIMER - These instructions assume a level of understanding of motorcycle repair and maintenance beyond that of a "beginner" or "novice", and California Sidecar cannot be liable for an installer's failure to understand or follow these instructions as written. Likewise, California Sidecar cannot be responsible if any of the steps are omitted or shortcuts are taken, or parts other than those supplied by CSC, are used in installing this trike conversion kit.

"WARNINGS" are printed in bold type. **PLEASE USE EXTREME CARE** so as not to damage the part, the motorcycle, or yourself!!

ALWAYS wear safety glasses when working with hand and power tools, and when working with or around any harmful or hazardous materials! Additionally, when working in and around the fuel system, **ALWAYS** work in a well ventilated area free from sparks and open flames!

DIRECTIONAL REFERENCES
- All references to "right" and "left" side are as if one is seated on the motorcycle.
- All references to "forward" mean toward the front of the motorcycle while "back" means toward the rear of the motorcycle unless otherwise stated.

SAVING AND DISCARDING PARTS - During installation, if parts are intended to be "saved" for later use, they are marked "SAVE" in italics. If removed parts are not marked "SAVE", they may be discarded.

LIST OF TOOLS AND EQUIPMENT - This list contains only those items that might be construed as out of the ordinary for someone repairing a motorcycle. **A COPY OF THE O.E.M SERVICE MANUAL IS ESSENTIAL TO THIS INSTALLATION.**

Trike Installation

- 5/16" drill bit
- Flat Black Spray Paint
- Floor Jack
- Ring Pliers
- Silicone Sealer
- Super Glue
- Teflon Sealing Tape

Trailer Hitch Installation

- 1/8 X 8" or 3/16 X 8" drill bit

IMPORTANT Note to Installing Dealer:
Please forward the **Owner Info Pack** to the purchaser of this product. It contains valuable information for the end-user of this product.

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PARTS LIST

1.) **BODY FRAME**
- ☐ 4 - 5/16-18 X 3 HHCS
- ☐ 8 - 5/16 USS Flat Washer

- ☐ 6 - 5/16-18 Nyloc Nut
- ☐ 2 - 5/16-18 x 1 HHCS
- ☐ 2 - 5/16 Fender Washer
- ☐ 1 - Rear Tour Box Bracket
  - ☐ 1 - With CB
  - ☐ 1 - Without CB
- ☐ 2 - Air Shock Front Mounting Bracket
  - ☐ 2 - 3/8-16 x 1-1/4 HHCS
  - ☐ 4 - 3/8 SAE Flat Washer
  - ☐ 2 - 3/8-16 Nyloc Nut
- ☐ 2 - Air Shock Rear Mount Bracket
  - ☐ 2 - 3/8-16 x 1-1/4 HHCS
  - ☐ 4 - 3/8 SAE Flat Washer
  - ☐ 2 - 3/8-16 Nyloc Nut
- ☐ 4 - M10 x 1.25 x 35 SHCS
- ☐ 4 - M10 Flat Washer
- ☐ 4 - M8 X 1.25 Nyloc Nut
- ☐ 4 - M8 Flat Washer
- ☐ 3 - M6 Nyloc Nut

2.) AIR SHOCK MOUNT

- ☐ 1 - Valkyrie air shock mount
- ☐ 1 - Honda O.E.M. air shock
- ☐ 1 - Air shock filler line kit (see 2-A)
- ☐ 1 - 5/8-18 x 2-1/2 HHCS
- ☐ 1 - 5/8-18 Nyloc Nut
- ☐ 1 - M14 x 1.50 x 55 HHCS
- ☐ 1 - M14 x 1.50 Nyloc Nut
- ☐ 2 - M10 x 1.25 x 80 HHCS
- ☐ 4 - M10 x 1.25 Nyloc Nut
- ☐ 2 - M10 x 1.25 x 100 HHCS
- ☐ 16 - M10 Flat Washer

2-A.) AIR SHOCK FILLER LINE KIT

- ☐ 1 - Black air tubing (3' X 1/8")
- ☐ 1 - Adapter shock to air tube with O ring
- ☐ 1 - Bag consisting of:
  - ☐ 1 - Ferrel Nut
  - ☐ 1 - Ferrel
  - ☐ 2 - O-ring
- ☐ 1 - Air filler assembly
  - ☐ 1 - Needle valve S/S with cap
  - ☐ 2 - 5/16 Flat Washer S/S
  - ☐ 1 - Needle valve jam nut
- ☐ 1 - Brass adapter needle valve to air tube
  - ☐ 1 - Brass compression sleeve
  - ☐ 1 - Brass compression nut

3.) SPRING SHOCKS

- ☐ 1 - Spanner wrench
- ☐ 2 - Progressive shock
- ☐ 2 - 5/8-18 x 2-1/4 HHCS
- ☐ 2 - 5/8-18 Nyloc Nut

4.) SWING ARM ASSEMBLY

- ☐ 2 - Swing arm pivot bolts (left + right)

5.) FINAL DRIVE UNIT

- ☐ 8 - ½-20 Nyloc Nut for Ford Rear Drive
- ☐ 1 - Drive shaft, fitted with:
  - ☐ 1 - Yoke
  - ☐ 1 - U-joint
  - ☐ 1 - O.E.M front U-joint and yoke (modified)
- ☐ 1 - Box of Neapco #1-0189, 2 U-bolts, 4 Nuts and 4 Lock Washers

6.) EXHAUST SYSTEM - STANDARD

- ☐ 2 - Hanger mounts, chrome fitted with:
  - ☐ 2 - 5/16-18 X 1-3/4 HHCS
  - ☐ 4 - 5/16 SAE Flat Washer S/S
  - ☐ 2 - 5/16-18 Nyloc Nut

EXHAUST SYSTEM - OPTIONAL

- ☐ See Accessory List

☐ 2 - 3/8-24 x 1 HHCS
☐ 2 - 3/8-24 Nyloc Nut

7.) **BRAKE LINE SYSTEM**
☐ 1 - 2-piece steel braided brake line
☐ 1 - 2 lb. Residual valve
☐ 1 - M10 X 1.0 banjo bolt with two crush washers

8.) **WHEELS & TIRES**
☐ 8 - ½-20 Tapered Lug Nut

9.) **PASSENGER FOOT REST**
☐ 2 - Foot rest mount plate
☐ 4 - 3/8-16 x 1-1/2 BHSCS S/S
☐ 4 - 3/8-16 Nyloc Nut
☐ 2 - M10 x 1.25 x 40 HHCS
☐ 2 - M10 Lock Washer

10.) **MISCELLANEOUS**

☐ **Instructions** ☐ **Core Parts List**

ACCESSORY PARTS LIST

1.) TRAILER HITCH

- ☐ 1 - Receiver hitch plate
  - ☐ 6 - 5/16-18 x 1 HHCS
  - ☐ 6 - 5/16-18 Nyloc Nut
  - ☐ 12 - 5/16 SAE Flat Washer S/S
- ☐ 1 - Receiver tongue, chrome
- ☐ 1 - Receiver pin
- ☐ 1 - Receiver pin clip
- ☐ 1 - 1-7/8 Chrome ball with Lock Washer and Nut

2.) CHROME EXHAUST PIPE EXTENSIONS

- ☐ 2 - Turn down extensions, chrome
- ☐ 2 - ¼-20 x 1 HHCS
- ☐ 2 - ¼-20 Nyloc Nuts
- ☐ 2 - 3/8-24 x 1 HHCS
- ☐ 2 - 3/8-24 Nyloc Nut

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STEP 1: PREPARING THE MOTORCYCLE

Remove the following items IN ACCORDANCE WITH THE SERVICE MANUAL:

1. Rider seat (save)
2. Side covers (save)
3. Saddle bag guards (if installed)
4. Saddle Bags
5. Saddle bag mounting brackets
6. Tour Box (save)
7. Antenna & mount (save). Note: Disconnect antenna cable before removing.
8. Tour Box mounting brackets (save). Note: a new rear mount bracket is supplied with the installation kit.
9. Right and left rider foot rests (save)
10. Right and left passenger foot rests (save)
11. Passenger foot rests support brackets
12. Exhaust system (save)
13. Side stand
14. Back half of rear fender
15. Leaving wires as long as possible, cut off and save electrical plug from rear section of fender.

STEP 2: REMOVING REAR WHEEL & SWING ARM

Remove the following items IN ACCORDANCE WITH THE SERVICE MANUAL:

1. Drain brake fluid
2. Remove rear wheel
3. Remove both shocks.
4. Remove final drive unit
5. Remove rear brake caliper and brake line to rear master cylinder
6. Remove swing arm pivot lock nut (save)
7. Remove both swing arm pivot bolts
8. Remove U-joint boot from engine case
9. Remove Swing arm
10. Remove U-joint boot from swing arm (save)
11. Remove drive shaft from final drive unit
12. Remove C-clip, spring and cup washer from drive shaft (save)
13. Save front U-joint and yoke. **RETURN TO CALIFORNIA SIDECAR as core parts**

STEP 3: INSTALLING THE NEW SWING ARM FRAME

1. Install C-clip, spring and cup washer to new drive shaft.
2. Lightly grease spring and splines of new drive shaft.
3. Place drive shaft through swing arm and install new front yoke. BE CERTAIN THAT ALIGNMENT MARKS **LINE UP** PROPERLY.
4. Lightly compress and tie both U-joints together with wire through new swing arm frame.
5. Install U-joint boot on swing arm.
6. Install swing arm onto bike frame using new swing arm pivot bolts. (Refer to the service manual for proper procedure). Note: Do not loosen or cut wire (Step 3.4 above) holding drive shaft.
7. Torque to Honda specs listed below:

Right	Left	Lock

103 NM	19 NM	113 NM
76 ft. lbs	14 ft. lbs.	83 ft. lbs.

STEP 4: **INSTALLING THE REAR END**

1. Move the rear end into position with the swing arm.
2. Install eight (8) 1/2 x 20 nyloc nuts and torque to 55 lbs.
3. Cut and remove wire (installed in Step 3.4). Install U-bolts to rear drive yoke and torque to 20 lbs. Be certain that the bearing offsets in the yoke and the U-joint are properly aligned.
4. Route braided brake line forward from "T" fitting around to right side of frame and attach to master cylinder using OEM banjo bolt. It is necessary to bend brake line at master cylinder to allow enough clearance to reinstall master cylinder cover.
5. Using 12" wire ties, tie brake line to swing arm in at least 4 places and make sure it is clear of all obstructions and/or areas where it could be damaged or pinched.
6. Using DOT 4 brake fluid bleed all air from brake lines.
7. Add 3 pints or1½ quarts of 80-90 wt. gear oil to final drive unit.
8. Grease rear U-joint.
9. Push front yoke dust boot back over output shaft and on to engine case.

STEP 5: **INSTALLING THE AIR SHOCK MOUNT**

1. Drill out with 25/64 drill bit all the way through frame on both sides at the front and rear hole where passenger back rest was mounted.
2. Install air shock to mounting bracket with filler pipe pointing forward to front of bike. Be certain the clevis on the air shock mount points to front of bike.
3. Install air line adapter with air tube to air shock.
4. Place air shock and mount into position, (be certain the air line opening on shock is facing front of bike).
5. Install FRONT air shock mount bolts in the following sequence:
   M10 x 1.25 x 80 bolt, 1 M10 washer, body hanger, 3 M10 washers, then position bolt through motorcycle frame and air shock mount and fasten with M10 x 1.25 nyloc nut.
6. Repeat step 5 for the other side of bike.
7. Install REAR air shock mount bolts in the following sequences:
   M10 X 1.25 X 100, 1 washer, through the chrome fender rail, then through fender, hanger bracket, and air shock mount, then add 3 washers and a 1 nyloc nut.
8. Repeat step 7 for the other side of bike.

STEP 6: **INSTALLING THE BODY FRAME**

1. Place body frame into position.
2. Install four (4) chrome M10 x 1.25 x 35 socket head bolts with four (4) M10 washers, through holes (2 on each side) and fasten where the passenger footrest brackets were mounted. Torque to 55 lbs.
3. Install all eight (8) 3/8 x 24 x 1¼ Gr.8 bolts, each with two (2) ? SAE flat washers and one (1) ? x 24 nyloc nut, connecting the body hanger brackets front and rear to body frame. Torque to 40 lbs.

STEP 7: **INSTALLING THE PROGRESSIVE SHOCKS TO THE MOTORCYCLE FRAME**

Before installing the Progressive shocks it necessary to set the "preload". These shocks come from the factory set at their lowest rebound setting and can be adjusted higher from the lowest setting to the highest. This is performed by placing the bottom of the shock in a vise and, using the spanner wrench provided with the kit, rotating the adjusting can on the bottom of the shock. Rotating clockwise increases the preload, and rotating counter-clockwise decreases the preload. These may need to be adjusted several times to suit rider preferences.

STEP 8: **INSTALLING SHOCKS TO SWING ARM**

1. Place a jack under final drive unit and raise the final drive unit so bottom of shocks align with the holes in the clevis brackets of swing arm.
2. Place the two (2) ? x 18 x 2-¼ Gr.8 bolts through clevis and shock, and fasten with two (2) ? X 18 nyloc nuts and torque to 55 lbs.
3. Fasten air shock to swing arm with M14 x 1.50 x 55 bolt and M14 x 1.50 nyloc nut and torque to 55 lbs.

STEP 9: **MODIFYING THE EXHAUST SYSTEM**

1. Remove chrome covers from each side of the exhaust pipes to expose the individual exhaust tubes where they fit into the muffler.
2. Leaving the jack in place under the final drive unit, raise the jack higher so exhaust system can be reinstalled. Tighten all exhaust bolts at cylinder head and torque to 16 lbs.
3. Using an oxy / acetylene torch with a rose bud tip, carefully heat all three pipes equally until they are red hot. When they are sufficiently hot insert a long metal pipe into the muffler to bend mufflers down 2" on both right and left sides. Be careful not to burn a hole through the exhaust pipe. It will be necessary to tie the motorcycle down and elevate the final drive unit enough for the mufflers to fit into their proper position.
4. On right side, re-heat same three exhaust tubes and again using metal pipe bend muffler out away from center of bike about 2". Again, be careful not to burn a hole in the exhaust pipe.
5. If exhaust extensions are not being used, install muffler hanger brackets now.
    a) Slide hanger mounts on from back and join to trike body frame mount with two $^{3}/_{8}$ x 24 x 1 ¼ long + nyloc nuts. **Do not tighten.**

b) Tighten all clamps and rear hanger brackets

6. If exhaust extensions are to be used remove left and right tail pieces and install extensions to mufflers.
7. If mufflers do not clear final drive unit or do not align to body frame muffler mount tabs, repeat steps 9.3 and 9.4.

STEP 10: **INSTALLING THE AIR SHOCK AIR HOSE TUBING**

1. Route air shock inlet tube to left side of front panel where the seat key release is and drill 5/16 hole next to the seat key release.
2. Insert air shock inlet valve and secure with nut supplied.

STEP 11: **INSTALLING THE BODY**

1. Be sure all previous steps are complete.
2. Place body on frame in a downward motion from above bike.
3. Using a "2 X 4" or "block" hold the front of body up so that you can re-install all 4 pieces of the tour box mounting frame.

   Note: The rear bracket is now supplied with the kit.
4. Align the body to the bike frame and wheels. Lift carpet up in areas where you will be drilling.
5. Drill six (6) 5/16 holes through body using holes in body frame as guide. **Be certain to pull inside trunk carpet out of the way of the holes to be drilled.**
6. Fasten body using the following bolts:

   Rear - four (4) 5/16 x 18 x 3 bolts with eight (8) 5/16 USS flat washers + four (4) 5/16 x 18 nyloc nuts.

   Front - two (2) 5/16 x 18 x 1 bolts with two (2) 5/16 x 1-1/2 fender washers + two (2) 5/16 x 18 nyloc nuts.
7. Re-install Tour Box and antenna to new rear mount. Run coaxial cable between tour box and trike body to the plug under the seat.

STEP 12: **INSTALLING THE WHEELS**

1. Install wheels with lug nuts provided and torque to 70 lbs. Re-check after 25 miles.
2. Install center caps with CSC logo.
3. Inflate tires to 20-25 lbs. of air pressure.

STEP 13: **INSTALLING PASSENGER FOOT RESTS**

NOTE: The footrest can be placed in two positions, whichever is more comfortable for the passenger.

1. Position footrest plates on body frame just in front of fender with top of plate flush with top of body frame.
2. Mark the two holes and drill out with 3/8 drill bit.
3. Install two (2) 3/8 x 16 x 1-1/2 button socket head bolts through foot rest plate and body frame. Next, install 3/8 x 16 nyloc nuts and torque to 20 lbs.
4. Repeat the above procedure for the opposite side.
5. Fasten footrest to plate with M10 x 1.25 x 35 bolt and M10 lock washer and tighten.

STEP 14: INSTALLING THE WIRING

1. Cut to length and crimp an appropriate terminal end to wire and connect to battery, red/black to + (positive) and white to - (negative).
2. Route small black antenna wire to the body frame (anywhere) and wrap around metal frame several times.
3. Connect wires from trike body to OEM plug removed in Step 2-3 as follows:

Motorcycle		Trike Kit
Light Blue	➔	Light Blue
Brown	➔	Brown
Green	➔	Green
Orange	➔	Orange
Green w/Red (brake)	➔	Green/Red

STEP 15: COMPLETING INSTALLATION

1. Re-install antenna and Tour Box to new rear mount. Run coaxial cable between tour box and new trike body then plug under the seat.
2. Check **all lighting** on the motorcycle and trike body for proper operation.

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